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ABSTRACT

The Ball Aptitude Battery (BAB) is a multiple ability test battery of specific work skills. It is designed for use in career counseling and personnel selection. The 14 BAB tests yield 16 ability scores: Clerical, Idea Fluency, Tonal Memory, Pitch Descrimination, Inductive Reasoning, Word Association, Writing Speed, Paper Folding, Vocabulary, Ideaphoria, Finger Dexterity-Left, Finger Dexterity-Right, Grip-Left, Grip-Right, Shape Assembly, and Analytical Reasoning. An additional musical rhythm test (adapted from Seashore, Lewis, and Saetveit) is also included. As part of longitudinal validity studies of the BAB by the Aptitude Validation Research project, this report presents percentile norms for each ability for eight occupational groups: accountants (n=64), airline pilots (n=19), Ball Company employees (n=61), carpenters (n=194), clerical workers (n=29), horticultural students (n=95), high school students (n=1028), and teachers (n=93). Sample sizes, means, and standard deviations for each BAB test and occupational group are given at the end of each section. (BS)

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Technical Report No. 14

OCCUPATIONAL BAB NORMS

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May, 1984

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Abstract

This report presents percentile norms of the Ball Aptitude Battery for following eight occupational groups: (a) Accountants (N = 64); (b) Airline Pilots (N = 19); (c) Ball Company Employees (N = 61); (d) Carpenters (N = 194); (e) Clerical Workers (N = 29); (f) DuPage Horticultural Students (N = 95); (g) High School Students (N = 1028); and (h) Teachers (N = 93).

Occupational BAB Norms

The Ball Aptitude Battery (BAB) is a multiple ability test battery developed by the Ball Foundation for career counseling and personnel selection (Sung & Dawis, 1981; Sung, Dawis, & Dohm, 1981).

The BAB consists of tests developed by the "work sample" approach of Johnson O'Connor (1935). The BAB tests are intended to provide reference dimensions for the linear description of specific work skills (Fleishman, 1967); that is, to estimate potential or aptitude for such skills.

The 14 BAB tests yielding 16 ability scores are as follows: Clerical, Idea Fluency, Tonal Memory, Pitch Discrimination, Inductive Reasoning, Word Association, Writing Speed, Paper Folding, Vocabulary, Kinesaphoria, Finger Dexterity--Left, Finger Dexterity--Right, Grip--Left, Grip--Right, Shape Assembly, and Analytical Reasoning. In addition, a musical test (Rhythm test) adapted from Seashore, Lewis, and Saetveit (1960) was included in the battery, for a total of 15 tests yielding 17 ability scores.

In 1975, the Ball Foundation undertook an Aptitude Validation Research project to standardize and validate the BAB through concurrent and longitudinal validity studies. The purpose of the concurrent validity study was to validate the BAB in the following seven occupations: airline pilots, elementary school teachers,

clerical workers, certified public accountants, managers, carpenters, and salesmen. On the other hand, the longitudinal study was designed to test 2,400 high school seniors across the country to examine the long-term predictive validity of the tests and to investigate the factor structure and cultural fairness of the tests.

The present study is a part of concurrent validity studies and the main purpose is to present percentile norms for various occupations studied.

Method

Subjects

The subjects participating in the present study consisted of 64 accountants, 19 airline pilots, 61 seed company employees, 194 carpenters, 29 clerical workers, 95 horticultural students, 1,028 high school students, and 93 teachers.

Test Administration

The testing was divided into two sessions: group testing and individual testing. The first 12 aptitude tests (Clerical through Finger Dexterity, including Rhythm in the above list) were administered in the group testing session. The remaining three tests--Grip, Shape Assembly, and Analytical Reasoning--were administered individually. The total testing time, with instructions and breaks, was about four and one-half hours.

Analyses

The test protocols were hand scored, simply by taking the number of correct responses and making no correction for guessing, and processed for computer analysis. Data analysis was undertaken on a CDC 6700 computer using SPSS version 7.0 programs. The analysis consisted of computation of descriptive statistics such as means and standard deviations, and percentile norms for each of the eight occupational groups.

Results and Discussion

Percentile norms for accountants, airline pilots, Ball Company employees, carpenters, clerical workers, horticultural students, high school students, and teachers are presented in Appendices A through H, respectively. At the end of each section sample sizes, means, and standard deviations for each BAB test and occupational groups are shown.

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Appendix A

Interim Occupational BAB Norms: Accountants

Interim Occupational BAB Norms:

Accountants

Percentile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
99	239+	61+	30	41+	243+	23+	79+	385+	99
98		57-60	28-29	40		22		343-384	98
97		55-56		38-39	233-242			336-342	97
96									96
95	238	52-54		37	230-232		78	328-335	95
94	237	51	27		225-229	21		310-237	94
93									93
92	234-236	50	27		221-224			301-309	92
91		49			216-220			300	91
90									90
89	233							294-299	89
88					211-215			293	88
87									87
86			26	35	208-210	20		287-292	86
85	231-232								85
84		45-48			204-207		77	285-286	84
83	230							276-284	83
82									82
81	229	44		34		19		273-275	81
80					203	18		259-272	80
79									79

Accountant Norms (contd.)

Percentile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
78	226-228				197-202			254-258	78
77			25		195-196		76	250-253	77
76	224-225								76
75	223	43						248-249	75
74									74
73								242-247	73
72		41-42		33	193-194			241	72
71	222								71
70	218-221					17		238-240	70
69		40			190-192		75	237	69
68									68
67	216-217		24		189	16		235-236	67
66	39								66
65									65
64				32				234	64
63		37-38					74	233	63
62	214-215								62
61		36						230-232	61
60									60
59	213				187-188		73	229	59
58				31	184-186				58
57	212								57

Accountant Norms (contd.)

Percentile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
56		35						227-228	56
55						15		225-226	55
54	211								54
53				30				222-224	53
52	210	34			181-183			218-221	52
51									51
50					180		72		50
49	209								49
48		33			178-179			217	48
47		32		29	177			209-216	47
46									46
45							71	206-208	45
44	208	31	23			14			44
43									43
42				28				193-205	42
41				27	171-176			196-197	41
40	206-207								40
39				26	170			194-195	39
38								192-193	38
37	204-205								37
36					168-169			190-191	36
35									35

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TECHNICAL REPORT

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BALL FOUNDATION

ccountant Norms (contd.)

rcentile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
34		30	22	25			70	187-189	34
33					166-167			183-186	33
32									32
31				24	163-165			178-182	31
30	203						69		30
29									29
28			21		162	13		175-177	28
27	202	29		22-23				173-174	27
26									26
25	199-201				159-161		68	172	25
24	198								24
23					158			171	23
22	197			20	157			167-170	22
21									21
20		28	20	19			66-67	163-166	20
19		27		18		12		160-162	19
18									18
17					156				17
16	196			17	155		65	156-159	16
15									15
14	195	26			150-154	11			14
13				16	146-149			150-155	13

Accountant Norms (contd.)

Percentile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
12									12
11					144-145			143-149	11
10									10
9		25	19		138-143		64	142	9
8	193-194	24			137		61-63	137-141	8
7									7
6	187-192	23		15	135-136		59-60	134-136	6
5	183-186	21-22		14	130-134	10	57-58	133	5
4									4
3	180-182		18-	11		9	53-56	132	3
2	179--	20-		6-	129-	8-	52-	131-	2
1									1
N	63	64	64	64	64	64	64	64	N
$\overline{X}$	203.53	35.95	23.41	27.80	180.22	15.55	71.44	218.52	$\overline{X}$
SD	30.68	9.56	2.78	7.88	27.57	3.56	6.19	59.01	SD

Accountants

2.1

Interim Occupational BAB Norms:

Accountants

Percentile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
99	49+	59+	216+	222+	30	80+	30+	35+	30+	99
98		54-58	214-215	217-221		72-79				98
97	48	53	208-213	214-216	29	68-71		34		97
96										96
95	47	52	192-207	213		67				95
94		51	190-191	205-212		65-66	29			94
93										93
92						64				92
91				204						91
90					28	63				90
89			186-189	201-203		61-62		33		89
88	46	50	181-185	196-200						88
87						59-60				87
86			177-180	195			28	32		86
85					27					85
84			172-176	188-194		58				84
83	45		169-172	186-187						83
82										82
81			167-168	184-185		57	27		29	81
80	44	49	166							80
79						56				79

Accountant Norms (contd.)

Percentile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
78										78
77			165	182-183		55				77
76										76
75		48			26		26			75
74										74
73			164	181		54				73
72		47		179-180						72
71						53				71
70	43		162-163			52				[illegible]
69								31		69
68										68
67				178			25			67
66			160-161							66
65						51				65
64					25		24			64
63			159	174-177					28	63
62										62
61						50				61
60	42							30		60
59		46	158	171-173						59
58	41		156-158				23			58
57					24					57

ccountant Norms (cont.)

ercentile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
56	40		155	170						56
55						49		29		55
54					23					54
53			154	167-169		48				53
52				166						52
51										51
50		45	152-153			47			27	50
49										49
48				164-165		46	22			48
47			150-151							47
46										46
45			147-149	162-163						45
44			144-146		22		20-21	28		44
43					21					43
42	39	44		160-161		45				42
41			142-143	157-159						41
40						44				40
39				156	20	43	19			39
38										38
37										37
36		43	141	154-155		42	18	27		36
35										35

Accountants

2.4

countant Norms (contd.)

rcentile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
34			138-140		19				26	34
33										33
32										32
31	38		136-137	152-153						31
30			134-135							30
29						40-41				29
28			131-133	149-151	18				25	28
27		42	130			35-39	17			27
26						34				26
25			125-129	146-148				26		25
24										24
23	37		121-124	136-145		31-33				23
22			115-120	132-135						22
21					17	30				21
20			111-114	130-131			16			20
19			104-110	126-129		28-29	15	25		19
18										18
17	36	41		118-125					24	17
16			102-103		16	27	14	24		16
15					15					15
14			96-101	110-117				23	23	14
13	35	40	89-95	104-109				22		13

Accountants

2.5

ıntant Norms (contd.)

entile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
2										12
1	34		88	102-103			13	21		11
0					13	25-26				10
9				98-101			12			9
8		39		94-97	12				22	8
7					11					7
6		35-38	86-87	90-93			11	16-20		6
5	33		84-85	88-89		22-24	10	15		5
4										4
3			74-83	80-87		15-21	9	11-14	21-	3
2	32-	34-	73-	86-	10-	14-	8-	10-		2
1										1
N	64	64	64	64	64	64	64	64	64	N
$\bar{X}$	40.67	45.30	145.44	159.94	20.92	44.22				$\bar{X}$
D	4.44	4.75	34.46	35.42	7.18	16.14				SD

Appendix B

Interim Occupational BAB Norms: Airline Pilots

nterim Occupational BAB Norms:

line Pilots

centile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
99	226	47+	28+	39+	212+	19+	79+	258+	99
98									98
97									97
96									96
95	216-225	41-46	27	36-38	193-211	16-18		201-157	95
94									94
93									93
92									92
91									91
90		38-49		33-35	176-192			198-200	90
89									89
88									88
87									87
86									86
85									85
84			26	32	166-177		78	192-197	84
83									83
82									82
81									81
80									80
79	208-215		25	30-31		15	77	186-191	79

Airline Pilot Norms (contd.)

Percentile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
78									78
77									77
76									76
75									75
74	203-207	37	23-24				76	185	74
73									73
72									72
71									71
70									70
69									69
68	200-202	36	22	28-29				179-184	68
67									67
66									66
65									65
64									64
63	198-199				162-165		75	176-178	63
62									62
61									61
60									60
59									59
58		34-35	21	27		14	74	174-175	58
57									57

Airline Pilot Norms (contd.)

Percentile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
56									56
55									55
54									54
53	196-197	30-33		22-26			72-73		53
52									52
51									51
50									50
49									49
48									48
47	195	28-29		20-21	157-161	13		173	47
46									46
45									45
44									44
43									43
42	192-194			19		11-12	71	171-172	42
41									41
40									40
39									39
38									38
37	185-191		20		149-156			168-170	37
36									36
35									35

Airline Pilot Norms (contd.)

Percentile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
34									34
33									33
32		26-27		18	144-148		69-70	166-167	32
31									31
30									30
29									29
28									28
27									27
26	183-184	24-25		17	142-143		67-68	163-165	26
25									25
24									24
23									23
22									22
21	180-182	23	19	16	135-141	10	66	150-162	21
20									20
19									19
18									18
17									17
16		21-22			132-134		65	135-149	16
15									15
14									14
13									13

Airline Pilot Norms (contd.)

Percentile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
12									12
11	164-179	17-20	17-18	14-15	130-131	9	52-64	126-134	11
10									10
9									9
8									8
7									7
6									6
5	163-	16-	16-	13-	129-	8-	63-	125-	5
4									4
3									3
2									2
1									1
N	19	19	19	19	19	19	19	19	N
$\bar{X}$	194.79	30.68	21.68	23.68	157.89	13.00	70.84	172.11	$\bar{X}$
SD	17.56	8.76	3.73	8.60	21.75	3.16	8.58	33.15	SD

Interim Occupational BAB Norms:

Airline Pilots

Percentile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
99	46+	53+	208+	245+	30	50+	30	35	30	99
98										98
97										97
96										96
95			202-207	232-243	29	47-49	29			95
94		51-52								94
93										93
92										92
91										91
90			200-201	228-231		42-46	28	34		90
89	45	49-50								89
88										88
87										87
86										86
85										85
84			194-199	216-227	28	40-41	27	33	29	84
83	44	47-48								83
82										82
81										81
80										80
79			192-193	210-215	27	39				79

line Pilot Norms (contd.)

centile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
78	43	46								78
77										77
76										76
75										75
74			189-191	204-209	26					74
73										73
72		45								72
71										71
70										70
69										69
68			187-188			38	26			68
67	42									67
66										66
65										65
64										64
63			181-186	202-203		37	25			63
62										62
61		44								61
60										60
59										59
58			178-180	195-201	25	34-36	24	32		58
57										57

Airline Pilot Norms (contd.)

Percentile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
56	41									56
55										55
54										54
53			174-177	188-194	24	33	23	31		53
52										52
51										51
50										50
49										49
48										48
47			172-173	186-187	21-23		22			47
46										46
45										45
44	39-40	42-43								44
43										43
42			171	184-185	19-20	28-32			27-28	42
41										41
40										40
39		41								39
38										38
37			165-170	179-183	18	26-27	21	30		37
36										36
35										35

ine Pilot Norms (contd.)

entile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
34										34
33	37-38	39-40								33
32			163-164	176-178	17		19-20			32
31										31
30										30
29										29
28		38								28
27										27
26			158-162	175	16	23-25	18	26		26
25										25
24										24
23										23
22		37								22
21			155-157	174	12-15	16-22	17			21
20										20
19										19
18										18
17	32-36									17
16			150-154	162-173		13-15	16	23-29		16
15										15
14										14
13										13

Airline Pilot Norms (contd.)

Percentile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
12										12
11		35-36	14-149	150-161	9-11	12	15	20-22	25-	11
10										10
9										9
8										8
7										7
6	31-	34-								6
5			147-	149-	8-	11-	14-	19-		5
4										4
3										3
2										2
1										1
N	18	18	19	19	19	19	19	19	19	N
$\overline{X}$	39.83	42.78	174.05	191.90	21.00	30.47	22.58	30.32	27.84	$\overline{X}$
SD	4.72	5.52	22.11	27.85	7.49	12.61	5.08	4.63	1.92	SD

Appendix C

Interim Occupational BAB Norms: Ball Employees

Interim Occupational BAB Norms:

Ball Company Employees

Percentile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
99	236+	57+	29+	44+	243+	23+	80	344+	99
98	235	49-56	28	41-43	231-242	20-22	79	313-343	98
97	230-234	47-48	27		220-230		78	308-312	97
96									96
95	227-229	46		40	199-219	18-19	77		95
94									94
93	226			39	197-198	17		298-307	93
92		42-45		38	195-196		76	288-297	92
91									91
90	222-225	40-41	26	37		16		270-287	90
89	221	39		36	193-194			267-269	89
88									88
87					190-192	15	75	264-266	87
86									86
85	218-220				189				85
84		36-38		35	188			261-263	84
83									83
82					187		74	258-260	82
81									81
80	217	35			186		73	256-257	80
79	214-216				184-185	14		253-255	79

Ball Company Norms (contd.)

Percentile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
78									78
77		34	25				70-72	249-252	77
76									76
75	212-213				182-183	13	69	247-248	75
74		33			181		68	246	74
73									73
72	211			34	180			244-245	72
71				33	179		67	241-243	71
70									70
69	210	32			177-178			234-240	69
68									68
67				32				225-233	67
66	209		24	31				224	66
65									65
64	208	31			174-176	12	66		64
63									63
62					172-173		65	222-223	62
61	207	30						217-221	61
60									60
59		29		30	171			211-216	59
58									58
57	206		23				64	208-210	57

Ball Company Norms (contd.)

rcentile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
56	205			29	170				56
55									55
54	204	28					63		54
53							60-62	202-206	53
52									52
51	203					11	59	200-201	51
50									50
49	200-202		22	28	168-169		58		49
48	198-199	27			164-167			198-199	48
47									47
46	197				163		57	196-197	46
45									45
44				27	162			195	44
43			21					191-194	43
42									42
41							55-56		41
40	195-196	26					54		40
39				25-26				186-190	39
38						10	53	181-185	38
37									37
36	194				159-161		51-52	176-180	36
35									35

all Company Norms (contd.)

ercentile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
34	191-193			24	157-158	9			34
33	190		20				50	173-175	33
32									32
31		25					48-49		31
30		24			153-156			172	30
29									29
28	188-189	23		23	152		45-47	161-171	28
27									27
26		22			151	8	44	154-160	26
25	187				150		41-43	151-153	25
24									24
23						7	40	146-150	23
22									22
21	186			22		6	39	142-145	21
20						5	36-38	140-141	20
19									19
18		21		21			34-35	137-139	18
17									17
16	184-185		19		144-149		33	135-136	16
15	180-183	20			143	4		128-134	15
14									14
13	179	19		19-20			32	120-127	13

l Company Norms (contd.)

centile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
12				18	139-142			115-119	12
11									11
10	173-178		18	17		3	25-31	110-114	10
9									9
8	171-172			16	135-138	2	24	101-109	8
7	166-170						21-23	100	7
6									6
5	164-165	17-18	16-17	15	131-134	1-	20	90-99	5
4									4
3	163-		15	13-14	130		17-19	76-89	3
2		16-	14-	12-	129-		16-	75-	2
1									1
N	61	61	61	61	61	61	61	61	N
$\overline{X}$	200.33	29.39	22.44	28.16	168.48	10.75	55.84	200.18	$\overline{X}$
SD	18.48	8.71	3.48	7.85	23.54	4.95	17.99	64.31	SD

terim Occupational BAB Norms:

l Company Employees

rcentile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AP	TONAL	PITCH	RHYTHM	Percentile
99	50+	55+	213+	236+	30	66+	30	35	30	99
98	49		212	233-235						98
97		54	190-211	212-232	28-29	59-65		34		97
96										96
95	48	53	186-189	198-211	27	56-58				95
94										94
93			185	197	26	55		33		93
92			183-184	192-196			28-29			92
91										91
90		52	182	178-191		53-54			29	90
89	47									89
88			161-181	176-177	24-25	52				88
87		51	155-160	168-175		48-51	27			87
86										86
85	46		153-154	163-167						85
84								32		84
83			151-152	162	23	47				83
82	45		148-150	156-161						82
81										81
80		50	134-147	149-155		46	26			80
79										79

Ball Company Norms (contd.)

Percentile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
78			126-133	142-148						78
77	44		120-125	136-141				31		77
76										76
75			119	134	22	45				75
74	43						25			74
73			117-118	132-133		44				73
72		49	116							72
71	42									71
70			115	130-131		43				70
69								30		69
68				126-129	21					68
67			114	124-125		42	24			67
66										66
65			111-113							65
64							23			64
63			110		20	41				63
62			108-109	123		40				62
61		48					22	29		61
60			107	122	19	39				60
59								28		59
58			106	120-121		37-38				58
57	41			119	18	36				57

Ball Company Norms (contd.)

Percentile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
56		47					21		27	56
55			105	118		35				55
54										54
53										53
52			103-104	117						52
51							20			51
50				116		33-34				50
49	40									49
48			102	113-115	17		19			48
47				112						47
46		46						27		46
45				111	16					45
44							18			44
43	39		99-101	109-110		31-32				43
42										42
41								26		41
40			95-98	106-108		30				40
39		45							26	39
38				105	15	29				38
37			94	104						37
36							17			36
35			93	103	14					35

Ball Company Norms (contd.)

Percentile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
34		44						25		34
33		43		102						33
32			91-92	100-101	13	28				32
31							16			31
30	38		90						25	30
29										29
28			88-89			27				28
27				99	12					27
26							15	23-24		26
25		42	86-87	98				22		25
24										24
23			84				14			23
22			84	97		25				22
21		41								21
20			83	96	11	24	13	21		20
19										19
18		40	82		10	22-23	12	20		18
17										17
16	37						10-11	19		16
15				94-95		19-21		18		15
14										14
13	36	39	80-81	92-93		17-18	9			13

Ball Company Norms (contd.)

Percentile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
12	35	38	78-79		9	13-16				12
11										11
10			76-77	90-91	8	10-12		17	24	10
9										9
8								16	23	8
7	32-34	36-37		89			7-8	15		7
6										6
5	31	35	75	88	5-7	8-9	6	14-	22	5
4										4
3	29-30		74	80-87	4	4-7				3
2	28-	34-	73-	79-	3-	3-	5-		21-	2
1										1
N	61	61	60	60	60	60	61	61	61	N
$\overline{X}$	40.77	45.93	112.95	125.35	17.35	34.70	19.66	26.54	26.80	$\overline{X}$
SD	4.78	5.51	36.32	37.38	6.82	14.67	7.06	6.07	2.19	SD

Appendix D

Interim Occupational BAB Norms: Carpenters

Interim Occupational BAB Norms:

Carpenters

Percentile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
99	238+	48+	28+	40+	213+	20+	74+	264+	99
98	228-237	47		38-39	197-212		73	247-263	98
97	220-227				189-196	19	68-72	246	97
96	218-219	46	27				66-67	244-245	96
95	217	44-45					65	237-243	95
94	216	43		37	184-188	18	63-64	223-236	94
93	214-215						62	220-222	93
92	211-213	42					61	219	92
91		39-41	26	36	177-183			217-218	91
90	210					17	60	215-216	90
89							58-59	211-214	89
88	208-209			35	174-176			205-210	88
87	206--207	38			170-173		57	202-204	87
86	205	37						196-201	86
85	204			34	167-169		53-56	194-195	85
84	203		25		166	16		191-193	84
83		36		33	162-165		52	189-190	83
82								188	82
81	202	35						186-187	81
80	201			32			51	185	80
79	200							179-184	79

rpenter Norms (contd.)

rcentile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
78	199	34					49-50	178	78
77	198							176-177	77
76							48	172-175	76
75	197	33				15	47	171	75
74				31	157-161		46	163-170	74
73	196								73
72			24				45	16-168	72
71		32		30				163	71
70					155-156				70
69	195				151-154		44	161-162	69
68	194				150			159-160	68
67	193							157-158	67
66	192			29			43	155-156	66
65	191	31				14		151-154	65
64		30						149-150	64
63							42	147-148	63
62	190	29			148-149		41	146	62
61					146-147		40		61
60			23	28	143-145			144-145	60
59	189							143	59
58								140-142	58
57	187-188			27		13	39		57

rpenter Norms (contd.)

rcentile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
56		28						138-139	56
55								137	55
54	186							135-136	54
53		27			141-142		38		53
52				26			37	131-134	52
51					139-140			130	51
50	185	26						129	50
49						12		124-128	49
48	184							121-123	48
47				25	137-138		36		47
46		25			135-136			120	46
45	183		22				35		45
44								119	44
43	182							116-118	43
42				24					42
41	181	24				11		114-115	41
40							34	111-113	40
39	180								39
38				23			33		38
37								103-108	37
36		23			134			101-102	36
35	178-179				132-133		32	100	35

Carpenter Norms (contd.)

Percentile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
34				22	130-131			99	34
33	177		21				31	98	33
32		22						95-96	32
31	176				129	10	30	94	31
30	175				125-128			92-93	30
29	174			21	123-124		29	91	29
28								89-90	28
27	173	21					28	87-88	27
26								86	26
25	172			20		9		81-85	25
24								80	24
23	170-171		20					77-79	23
22		20		19		8	27		22
21	169				122		26	76	21
20					121			74-75	20
19			19		119-120		25	73	19
18				18	116-118			70-72	18
17	168	19					24		17
16	167					7		66-69	16
15	164-166			17			23	65	15
14		18			115			63-64	14
13		17			112-114			62	13

rpenter Norms (contd.)

rcentile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
12				16	108-111	6	22	60-61	12
11			18	15			21	57-59	11
10	162-163			14				53-56	10
9	160-161						20		9
8	159	16			107	5	19	52	8
7	158		17	12-13	103-106		18	51	7
6	156-157	15						38-50	6
5	151-155	14			97-102	4		31-37	5
4	149-150	13	16	10-11	96	3	16-17	26-30	4
3	148	12	15	9	85-95			24-25	3
2	135-147	8-11	12-14	7-8		2	12-15	22-23	2
1	134-	7-	11-	6-	84-	1-	11-	21-	1
N	192	191	194	193	186 194	194	193	193	N
$\bar{X}$	185.44	27.65	22.51	25.70	141.73	12.26	38.87	130.57	$\bar{X}$
SD	19.92	9.06	3.30	7.86	26.92	4.41	14.54	59.79	SD

Carpenters

2.1

Interim Occupational BAB Norms:

Carpenters

rcentile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
99	52+	58+	228+	238+	30	54+				99
98	51	57	222-227	230-237		53				98
97		56	218-221	226-229		51-52				97
96			216-217	226-227	29					96
95	50	55	205-215	221-225		50				95
94			201-205	220		49				94
93	49	54	200	218-219		48				93
92			199	217	28					92
91	53		197-198	214-216		47				91
90			196	213		45-46				90
89	48	52		212						89
88			194-195	211	27					88
87			192-193	210		44				87
86			190-191			43				86
85		51	189	209						85
84	47		188	208	26	41-42				84
83			187	206-207		40				83
82			185-186							82
81			184			39				81
80	46		183	205						80
79				204						79

Carpenter Norms (contd.)

Percentile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
78		50	182	202-203	25	38				78
77				200-201						77
76		49				37				76
75				198-199		36				75
74			181	197		35				74
73	45		180	196	24					73
72						34				72
71						33				71
70				195						70
69		48								69
68	44		179	194		32				68
67						31				67
66			178	192-193						66
65				191						65
64			177	190		30				64
63		47		189	23					63
62			176	188						62
61						29				61
60			174-175	187						60
59	43					28				59
58				186		27				58
57				185						57

rpenter Norms (contd.)

rcentile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
56			172-173	184						56
55			170-171			26				55
54										54
53			169	182-183						53
52					22					52
51	42	46	168			25				51
50			167							50
49						24				49
48			166	180-181						48
47										47
46				179						46
45	41			178		23				45
44		45	165		21					44
43			164							43
42				176-177						42
41			163							41
40			162		20	22				40
39			161							39
38			160			21				38
37	40	44		174-175						37
36						20				36
35				173						35

Carpenter Norms (contd.)

Percentile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
34			159	172	19					34
33			158			19				33
32		43	157	171						32
31			156							31
30	39			170						30
29					18	18				29
28			155	168-169						28
27			154			17				27
26				167		16				26
25	38	42	152-153	166	16	15				25
24										24
23			151	164-165	16					23
22		41								22
21			150	162-163						21
20			148-149			14				20
19	37									19
18				161	15	13				18
17			147	160						17
16			146							16
15	36					12				15
14		40	143-145	158-159		11				14
13			142	154-157	14					13

Carpenter Norms (contd.)

Percentile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
12				152-153						12
11			141	150-151		10				11
10		39	140	148-149	13					10
9		38	137-139	146-147		9				9
8	35		136		12	8				8
7	34	37		139-145	11					7
6	33		134-135	137-138	10	7				6
5		36	133	133-136						5
4	31-32		128-132	128-132	9	6				4
3	30	35	120-127	122-127	7-8	5				3
2	29	32-34	115-119	114-121	6					2
1	28-	31-	114-	113-	5-	4-				1
N	188	188	189	190	190	191	0	1	0	N
$\bar{X}$	41.92	46.06	168.60	181.98	21.06	26.64	6			$\bar{X}$
SD	5.94	5.58	23.58	26.46	5.71	13.22				SD

Appendix E

Interim Occupational BAB Norms: Clerical Workers

nterim Occupational BAB Norms:

rical Workers

centile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
99	240+	41+	29+	43+	204+	23+	79+	333+	99
98									98
97	238-239	39-40	28	38-42	193-203	19-22	78		97
96								283-332	96
95									95
94									94
93	237	35-38			189-192	18	75-77	267-282	93
92									92
91									91
90		32-34	27-	37					90
89						17		250-266	89
88									88
87									87
86	230-236	31	26	36		16	72-73	242-249	86
85									85
84									84
83	228-229				184-188		71	233-241	83
82									82
81									81
80									80
79					177-183			224-232	79

Norms (contd.)

le	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
									78
									77
	225-227	30	25	35			68-70	210-223	76
									75
									74
									73
	220-224	25-29		34		15		205-209	72
									71
									70
	214-219	24		32-33			67	195-204	69
									68
									67
	212-213	23			170-176	14	63-66	192-194	66
									65
									64
									63
	211		24				61-62	163-191	62
									61
									60
	210			31	162-169	12-13	59-60	152-162	59
									58
									57

Clerical Norms (contd.)

Percentile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
56									56
55		22				11	55-59	149-151	55
54									54
53									53
52	209			30				145-148	52
51									51
50									50
49									49
48							52-55	135-144	48
47									47
46									46
45	205-208		23	29		10	51	130-134	45
44									44
43									43
42									42
41	204	21			159-161	9	44-50	118-129	41
40									40
39									39
38	201-203	19-20	22	28	157-158	8	43	93-117	38
37									37
36									36
35	198-200						42	92	35

Clerical Norms (contd.)

Percentile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
34									34
33									33
32									32
31	195-197	17-18	21	27			41	84-91	31
30									30
29									29
28		16			145-146	7		76-83	28
27									27
26									26
25									25
24		15	20	24-26	139-140	6	40	70-75	24
23									23
22									22
21	194		18-19	21-23	135-138	5	36-39	64-70	21
20									20
19									19
18									18
17	190-193	13-14	17	18-20			29-35	62-63	17
16									16
15									15
14	185-189	12	16	15-17		4	25-28		14
13									13

Clerical Norms (contd.)

Percentile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
12									12
11									11
10	174-184	11	13-15		130-134	3	21-24	55-61	10
9									9
8									8
7	172-173		12	12-14	124-129		19-20	52-54	7
6									6
5									5
4									4
3	171-	10-	11-	11-	123-		18-	51-	3
2									2
1									1
N	29	29	29	29	29	29	29	29	N
$\overline{X}$	207.97	22.48	22.34	28.62	162.00	11.03	52.34	150.83	$\overline{X}$
SD	20.20	8.58	4.84	8.65	22.08	5.61	18.91	81.25	SD

terim Occupational BAB Norms:

erical Workers

rcentile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
99	51+	62+	173+	194+	28+	65+	29+	33+	30	99
98										98
97	50	59-61			25-27					97
96			152-172							96
95										95
94										94
93	49	54-58	151-153	172-193	24	63-64				93
92										92.
91								32		91
90	48				23	61-62				90
89			144-150							89
88										88
87										87
86		53	134-143	157-171		50-60				86
85										85
84										84
83	47				22	48-49				83
82			124-133	156			27-28			82
81										81
80										80
79			122-123	133-155	20-21					79

Clerical Norms (contd.)

Percentile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
78										78
77										77
76		52				42-47				76
75			115-121	120-132						75
74										74
73							26			73
72	46	51			19	38-41				72
71			106-114	114-119						71
70										70
69										69
68										68
67										67
66		50			18	37				66
65										65
64				108-113				31	29	64
63										63
62	45					36				62
61			103-105							61
60										60
59	44									59
58										58
57			102	106-107						57

erical Norms (contd.)

rcentile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
56										56
55					17			30	28	55
54			100-101							54
53										53
52					15-16	34-35				52
51										51
50			98-99	104-105						50
49										49
48	43	49				30-33				48
47										47
46			94-97				24-25			46
45					14	26-29				45
44										44
43				103						43
42										42
41	42	48			12-13	25				41
40										40
39			92-93	102						39
38						23-24				38
37										37
36			90-91	100-101				28-29		36
35	41	47			11					35

lerical Norms (contd.)

ercentile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
34										34
33										33
32			89	99						32
31		46			10					31
30										30
29			88	97-98						29
28	40	44-45			8-9	19-22				28
27							18-23		27	27
26										26
25		84-87								25
24										24
23										23
22										22
21	39			94-96		18				21
20										20
19										19
18				90-93				26-27	25-26	18
17	37-38	43			6	16-17				17
16										16
15										15
14			68-83		5	11-15				14
13										13

Clerical Norms (contd.)

Percentile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
12										12
11			66-67							11
10	36	41-42			4					10
9							17-	25-	24-	9
8										8
7	84-35	40	65	88-89	2-3	9-10				7
6										6
5										5
4			64-	87-						4
3	33-	39-			1-	8-				3
2										2
1										1
N	29	29	28	28	29	29	11	11	11	N
$\overline{X}$	43.03	48.62	103.07	116.50	14.55	32.86	22.91	29.09	28.09	$\overline{X}$
SD	4.90	5.92	28.71	34.39	7.48	17.34	7.01	4.25	2.07-	SD

Appendix F

Interim Occupational BAB Norms: Horticultural Students

Interim Occupational BAB Norms:

DuPage Horticultural Students

Percentile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
99	227+	47+	29+	40+	211+	22+	73+	278+	99
98	226	43-46	28	39	204-210	20-21		268-277	98
97	225			37-38	201-203		72	260-267	97
96	223-224	42			197-200		71		96
95	222	41	27					253-259	95
94	218-221	39-40		36	196	19	70	252	94
93	217				195		69	247-251	93
92	215-216				193-194	18	68	239-246	92
91		38						233-238	91
90	214	37		35			67		90
89					191-192				89
88	213		26		190	17	65-66	231	88
87					189			230	87
86	211-212	36						227-229	86
85	210			34			64	224-226	85
84								220-223	84
83	209				188	16			83
82				33	184-187		63	218-219	82
81	206-208				181-183			217	81
80	205	35	25	32			62	216	80

DuPage Horticulture Norms (contd.)

Percentile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
79		34			177-180		61		79
78	204							215	78
77	203						60		77
76	202	33			174-176			212-214	76
75	200-201	32			171-173		59		75
74	199							208-211	74
73					170			206-207	73
72	198	31		31					72
71	197				168-169			205	71
70			24			15	58		70
69									69
68	196				166-167			203-204	68
67		30						199-202	67
66	195			30				196-198	66
65					165	14	57	194-195	65
64					163-164			192-193	64
63	194				162		55-56	189-191	63
62				29			54		62
61	193							188	61
60		29					52-53	187	60
59	191-192		23						59

DuPage Horticulture Norms (contd.)

Percentile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
58		27-28					51	186	58
57	190			28		13	50	184-185	57
56							49	180-183	56
55	187-189	26						177-179	55
54				27	159-161		48		54
53					158		47	176	53
52	186			26	157		46	175	52
51							45		51
50			22					174	50
49									49
48		25			156			172-173	48
47	185				154-155	12			47
46	184				153				46
45		24			152		44	170	45
44	183			25	150-151		43		44
43	182								43
42	181			24			42	164-169	42
41								163	41
40		23		23		11	41		40
39	180			22				159-162	39
38			21		146-149			158	38

DuPage Horticulture Norms (contd.)

Percentile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
37							40	152-157	37
36							39	151	36
35					144-145			150	35
34		22						144-149	34
33	179			21	143		38		33
32						10		142-143	32
31	178	21						140-141	31
30				20	142			136-139	30
29					141				29
28	177								28
27	176		20		139-140			133-135	27
26		20			135-138		37	128-132	26
25								127	25
24	175	19		19				125-126	24
23	174							123-124	23
22							36	122	22
21	173					9			21
20								115-121	20
19	171-172			18					19
18		18					35	112-114	18
17	170		19		134		34	110-111	17

e Horticulture Norms (contd.)

ntile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
5	168-169	17		17	133	8		108-109	16
5					130-132		33		15
4	167			16				102-107	14
3		15-16						100-101	13
2	165-166			15			32		12
1	163-164		18		123-129				11
0	162	14				7		99	10
9									9
8	160-161			14			30-31	98	8
7							28-29	86-97	7
6	158-159	13		13		6	27	80-85	6
5					122		26		5
4	157	11-12	17		120-121		25		4
3	153-156	10		12	119			77-79	3
2	150-152	9			116-118	5-	24	74-76	2
	149-	8-	16-	11-	115-		23-	73-	1
	95	95	95	95	94	95	95	95	N
	188.35	26.44	22.60	25.87	157.63	12.81	48.27	170.84	$\bar{X}$
	19.22	9.04	3.17	7.63	24.38	4.08	13.91	54.00	SD

DuPage Horticulture

2.1

nterim Occupational BAB Norms:

Page Horticultural Students

rcentile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentil
99	54	69	223+	244+	39+	64+	30	34	30	99
98	53	65-68	214-222	228-243	38	60-63	29			98
97		58-64	213	226-227	29-37	59	28			97
96			206-212	225	28	57-58		33		96
95	52	56-57	205	214-224		55-56				95
94			204	213						94
93	51		203	212						93
92	50	54-55		210-211			27			92
91					27	53-54				91
90	49	53		207-209		52				90
89			194-199	206		50-51				89
88		52		204-205		49				88
87	48	51	193	203				32		87
86					26	48				86
85	47		191-192	202					29	85
84			189-190	200-201		47				84
83			187-188	198-199		46	26			83
82		50	186	197	25	45		31		82
81	46		185			43-44				81
80			184	196		42				80

DuPage Horticulture Norms (contd.)

Percentile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
79			183			41				79
78										78
77			182	195				30		77
76				194	24		25			76
75		49	180-181							75
74			179	192-193						74
73			178	190-191		40				73
72	44		176-177							72
71		48	175		23					71
70				189		39	24			70
69				188						69
68									28	68
67			174	187		38				67
66				186						66
65					22					65
64	43									64
63				184-185		37				63
62				183						62
61			173	182	21		23			61
60			170-172			36				60
59								29		59

uPage Horticulture Norms (contd.)

ercentile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
58			168	180-181			22			58
57										57
56	42	47								56
55				179		35				55
54			167	178						54
53				177						53
52			166	176		34	21			52
51			165							51
50					20					50
49										49
48		46	164	174			20			48
47				173		33			27	47
46			161-163	172		32		28		46
45	41		160	171	19					45
44			159	170						44
43		45	155-158	168-169		31				43
42			154					27		42
41							19			41
40					18					40
39			152-153							39
38		44	151	165						38

DuPage Horticulture Norms (contd.)

Percentile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
37						30				37
36			150	164						36
35	40						18			35
34			148-149	159-163	17					34
33			147	158						33
32	39			155-157		28-29				32
31		43	142	154	16	26-27	17	26	26	31
30			140-141	152-153		25				30
29			136	150-151						29
28			135					25		28
27			134	145-149		24	16			27
26		42	130	144	15					26
25				138-143	14					25
24			126-129	136-137		23		24		24
23			124-125	132-135						23
22	38		123	131		22	15			22
21			122				14	23		21
20			120							20
19		41	116-119	130		21			25	19
18				124-129	13	20				18
17			113							17

DuPage Horticulture Norms (contd.)

Percentile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
16	37					19	13	22	24	16
15				119-122			12			15
14			111-112	116-118	12	18				14
13		40	110	114-115						13
12			109	110-113		15-17				12
11	36		105-108			14	11	21		11
10	35		103-104		11		10			10
9				109		13			23	9
8		39		107-108	8-10	12	9			8
7		37-38	100	106	5-7			20		7
6	34									6
5	33				4	11	8	19	22	5
4			98-99	102-105		8-10		16-18		4
3	32	36	90-97	96-101						3
2		35	81-89	92-95	2-3	7	2-7	15	21	2
1	31	28-34	78	89-91	0-1	5			15-20	1
N	95	95	95	95	95	95	95	95	95	N
$\overline{X}$	42.26	46.88	157.18	168.10	19.60	33.44	20.15	27.53	27.11	$\overline{X}$
SD	5.18	8.09	34.44	36.74	7.38	13.46	6.39	4.53	2.52	SD

Appendix G

Interim Occupational BAB Norms: High School Students

Interim Occupational BAB Norms:

High School Students

Percentile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
99	234+	53+	28+	40+	216+	22+	72+	303+	99
98	230-233	50-52		39	205-215	21	69-71	284-302	98
97	227-229	48-49		38	204	20	66-68	274-283	97
96	224-226	46-47	27	37	197-203		64-65	266-273	96
95	221-223	45			192-196	19	63	263-265	95
94		44		36	189-192	18	61-62	258-262	94
93	219-220	43					60	254-257	93
92	218	42	26			17	59	250-253	92
91	217	41		35			57-58	247-249	91
90	216				184-188	16	56	244-246	90
89	214-215	40					54-55	239-243	89
88		39		34	179-183		53	236-238	88
87	213				177-178		52	233-235	87
86	212	38	25				51	229-232	86
85	211	37				15	50	225-228	85
84	210			33	174-176			222-224	84
83	209	36			172-173		49	220-221	83
82					170-171		48	217-219	82
81		35		32				214-216	81
80	208					14	47	212-213	80

High School Student Norms (contd.)

Percentile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
79		34			168-169		46	208-211	79
78	207			31			45	207	78
77	206		24		166-167			206	77
76	205	33					44	203-205	76
75	204					13	43	201-202	75
74					164-165		42	200	74
73	203	32		30	162-163		41	197-199	73
72	202							195-196	72
71	201	31					40	192-194	71
70								190-191	70
69	200					12	39	187-189	69
68	199	30					38	185-186	68
67	198			29				184	67
66	197							181-183	66
65			23				37	177-180	65
64	196	29						176	64
63						11	36	175	63
62	195			28				172-174	62
61	194				158-161			170-171	61
60		28			157		35	168-169	60
59							34	166-167	59

High School Student Norms (contd.)

Percentile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
58	193							163-165	58
57							33	162	57
56	192	27		27	156			160-161	56
55	191				152-155		32	159	55
54			22		150-151			157-158	54
53	190					10		155-156	53
52							31	153-154	52
51	189	26		26			30	150-152	51
50								149	50
49	187-188							146-148	49
48	186						29	144-145	48
47		25		25	148-149			142-143	47
46					146-147	9		141	46
45	185				144-145		28	138-140	45
44					143			136-137	44
43	184	24	21	24				134-135	43
42							27	132-133	42
41	183							130-131	41
40							26	129	40
39	182	23			141-142	8		128	39
38				23				125-127	38

High School Student Norms (contd.)

Percentile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
37	181							124	37
36					139-140		25	121-123	36
35		22						120	35
34	180			22	138			118-119	34
33					135-137		24	116-117	33
32	179		20			7		114-115	32
31		21						113	31
30	178			21			23	110-112	30
29								106-109	29
28	177	20					22	104-105	28
27								102-103	27
26	176			20				100-101	26
25	175	19				6	21	98-99	25
24	174		19					96-97	24
23								94-95	23
22	173	18		19	131-134		20	93	22
21	172							90-92	21
20	171						19	88-89	20
19	170	17		18		5		86-87	19
18	169		18		127-130			84-85	18
17	168				124-126			82-83	17

High School Student Norms (contd.)

Percentile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
16	167	16		17	123		18	79-81	16
15	166							75-78	15
14	165		17			4		72-74	14
13	164			16	120-121		17	70-71	13
12	163	15			116-119			68-69	12
11	162						16	66-67	11
10	160-161	14	16	15	114-115			64-65	10
9	159			14	112-113	3		58-63	9
8	158	13			108-111	15		55-57	8
7	155-157	12	15	13				52-54	7
6	153-154			12				47-51	6
5	151-152	11	14	11	103-107	2	14	41-46	5
4	149-150	10			100-102		13	35-40	4
3	146-148	9	13	10	89-90		12	29-34	3
2	140-145	7-8	11-12	6-9	76-88	1	11	21-28	2
1	139-	6-	10-	5-	75	0	10-	20-	1
N	1022	1024	1029	1026	999	1028	1024	1017	N
$\overline{X}$	188.89	26.97	21.75	25.44	150.33	10.21	33.64	151.99	$\overline{X}$
SD	9.22	10.43	3.96	7.74	36.86	4.99	15.38	68.33	SD

Interim Occupational BAB Norms:

High School Students

Percentile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
99	55+	62+	190+	204+	29+	65+	30	34+	30	99
98	53-54	59-61	186-189	198-203	28	62-64				98
97	51-52	58	178-185	194-197		59-61	29			97
96	50	57	175-177	192-193	27	57-58		33		96
95		56	173-174	188-191		55-56	28			95
94	49		170-172	185-187	26					94
93	48	55	169	184		54				93
92			166-168	181-183		52-53				92
91	47	54	165	179-180	25	51	27	32		91
90		53	164	178						90
89			162-163	176-177	24	50				89
88	46		159-161	175		49			29	88
87			158	173-174						87
86		52	156-157	170-172	23	48				86
85			155	169			26	31		85
84			154	167-168		47				84
83	45		151-153	165-166						83
82		51	150	164	22	46				82
81			148-149	162-163		45				81
80			147	161		44	25			80

High School Student Norms (contd.)

Percentile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
79	44		145-146	160						79
78			144	158-159	21	43		30		78
77		50	143	157						77
76			141-142	156		42				76
75			140	154-155			24			75
74			138-139	152-153	20	41				74
73	43	49		151						73
72			136	150		40		29		72
71			135	148-149						71
70			134	146-147		39	23			70
69			132-133	145	19	38		28		69
68			130-131	144						68
67	42	48	129	142-143		37			28	67
66			128	140-141						66
65			127	138-139		36	22			65
64			126	137	18					64
63			124-125	134-136		35				63
62		47		133		34				62
61			122-123	132			21	27		61
60			120-121	131	17	33				60
59	41			130						59

ool Student Norms (contd.)

le	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
			118-119	128-129		32				58
			116-117	126-127						57
		46	115	125	16		20			56
			114	124		31				55
			112-113	122-123				26		54
			110-111	121		30				53
			109	120	15		19			52
			107-108	118-119						51
	40			116-117		29		25	27	50
		45	106	115		28				49
				114			18			48
			104-105		14	27				47
				113						46
			102-103	112				24		45
			101	111		26	17			44
	39		100	110	13					43
			99			25		23		42
		44	98	109						41
			97	108		24	16			40
			96	107						39
			95		12	23				38

High School Student Norms (contd.)

Percentile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
37			94	106				22		37
36	38			105		22	15			36
35			92-93						26	35
34		43		104		21		21		34
33			91			20				33
32			90	102-103	11					32
31						19				31
30			89	101		14				30
29	37	42						20		29
28			88	100	10	18				28
27										27
26			87	99		17	13			26
25			86	98		16				25
24	36		85		9			19		24
23			84	97					25	23
22		41	83	96		15	12			22
21			82	95	8					21
20				94		14	11			20
19	35		81	93	7					19
18			80	92		13		18		18
17		40		91		12	10			17

gh School Student Norms (contd.)

rcentile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
16			79	90	6			17		16
15	34		78					16	24	15
14				88-89	5	11	9			14
13			77							13
12		39	76	86-87		10		15		12
11	33		74-75	85	4				23	11
10		38	72-73	84		9	8			10
9			71	82-83			7	14		9
8			70	80-81	3	8				8
7	32	37	68-69	78-79		7				7
6	31		66-67	76-77		6	6	13	22	6
5		36	64-65	74-75	2	5		12		5
4	30	35	62-63	72-73			5		21	4
3	29	34	60-61	66-71	1-	3-4	9	11	20	3
2	28	33	55-59	64-65				9-10		2
1	27-	32-	54-	63-		2-	3-	8-	19-	1
N	1014	1013	894	897	932	935	415	414	415	N
$\bar{X}$	40.44	46.88	113.95	125.96	15.02	29.91	18.44	24.47	26.96	$\bar{X}$
SD	6.12	6.35	34.72	36.20	7.49	15.97	7.14	6.58	2.65	SD

Appendix H

Interim Occupational BAB Norms: Teachers

Teachers

1.1

Interim Occupational BAB Norms:

Teachers

Percentile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
99	240+	59+	29+	42+	216+	24	78+	319+	99
98	239	56-58		40-41				295-318	98
97		54-55			204	23		292-294	97
96		53	28	39		22		288-291	96
95	237-238	52						287	95
94	235-236	51			192-203	21		278-286	94
93		49-50	27				77		93
92	232-234				195-196				92
91	229-231	48		38	193-194			277	91
90	228							272-276	90
89	227			37		20		271	89
88	226				192			270	88
87	225	47			190-191			269	87
86	222-224	46						266-268	86
85	220-221			36	189			264-265	85
84						19			84
83	219	45					76		83
82	218	43-44						263	82
81						18	75	261-262	81
80	217			35	186-188				80

Teacher Norms (contd.)

Percentile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
79				34	185		74	259-260	79
78					184				78
77	216		26			17			77
76	214-215	42				16			76
75								257-258	75
74							73		74
73				33	183			256	73
72		41			181-182			253-255	72
71				32	180		72		71
70					178-179			251-252	70
69	213				177			249-250	69
68		40		31			71		68
67	212							246-248	67
66						15		245	66
65		39					70	244	65
64	211								64
63		38	25		173-176			243	63
62					171-172			237-242	62
61	210				170			235-236	61
60				30					60
59	209						69	233-234	59

Teachers

1.3

Teacher Norms (contd.)

Percentile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
58								232	58
57		37				14			57
56				29					56
55	208				168-169			231	55
54							68	228-230	54
53									53
52					166-167			227	52
51	207	36						226	51
50	206			28				225	50
49					164-165				49
48					163	13			48
47	205		24		162			224	47
46	204							223	46
45		35		27			67	222	45
44								221	44
43		34					66	219-220	43
42				26	161				42
41					157-160		65	218	41
40								212-217	40
39				25		12		211	39
38	203	33		24				208-210	38

Teacher Norms (contd.)

Percentile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
37	201-202				153-156		64	206-207	37
36					151-152		63	205	36
35	200				150				35
34		32					62	202-204	34
33	199			23			61		33
32	198							200-201	32
31								199	31
30		31	23						30
29							60	197-198	29
28	197							194-196	28
27	192-197			22	148-149				27
26	190-191					11	59	193	26
25			22		144-147			189-192	25
24					143			186-188	24
23	188-189	30		21		10	58		23
22	187				142				22
21					141				21
20	185-186							181-185	20
19	184						57		19
18		29		20				180	18
17			21		139-140		55-56	179	17

Teacher Norms (contd.)

Percentile	CLER	IF	IR	WA	WS	PF	V	IP	Percentile
16	183			19		9	54	178	16
15				18			52-53	175-177	15
14				17	137-138			173-174	14
13	181-182	28	20		135-136		51	172	13
12	180			16			50	171	12
11				15		8	49	169-170	11
10		27		14			46-48	168	10
9	178-179	26					43-45	161-167	9
8	177	25		13	130-134		42	156-160	8
7	174-176	23-24	19			7	41		7
6									6
5		22		12				150-155	5
4	169-173	21	18	9-11	126-129	6	38-40	137-149	4
3	168	20			119-125		37	136	3
2	157-167	19		7-8	116-119		35-36	135	2
1	156-	18-	17-	6-	115-	5-	34-	134-	1
N	92	93	93	93	92	93	93	93	N
$\overline{X}$	204.45	36.83	24.26	27.30	164.72	14.08	65.02	223.15	$\overline{X}$
SD	18.84	8.74	2.80	8.57	23.92	4.57	11.32	44.05	SD

Teachers

2.1

Interim Occupational BAB Norms:

Teachers

Percentile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
99	54+	58+	176+	198+	29+	76+	30	35	30	99
98	53	56-57		196-197		69-75				98
97	52	54-55		192-195		64-68				97
96	51		174-175	191						96
95	50		167-173	189-190	28	63				95
94	48-49	53						34		94
93		52	166	186-188		61-62				93
92			159-165	182-185						92
91			148-158	173-181						91
90				162-172	27					90
89	47		144-147			60				89
88		51	140-143	159-161						88
87	46		124-139	158	26		29			87
86			120-123	157		56-59				86
85			117-119	152-156	25	55				85
84			116	132-151						84
83	45									83
82				130-131		54				82
81			114-115	129	24	53				81
80		50	113	128						80

Teacher Norms (contd.)

Percentile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
79	44		110-112			52		33		79
78				124-127	23					78
77							28		29	77
76				118-123		51				76
75	43		108-109							75
74		49	107	117						74
73			106	116						73
72										72
71										71
70			105	114-115	22					70
69			104			50				69
68				113						68
67								32		67
66						49				66
65			103	112	21		27			65
64			102	110-111						64
63		48	101		20					63
62	42			109		47				62
61										61
60		47	100	108		46				60
59						45				59

Teacher Norms (contd.)

Percentile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
58										58
57			98-99							57
56			96-97							56
55			95	107	19	44	26	31		55
54			94	106						54
53						43				53
52		46								52
51				105	18	42		28		51
50							25			50
49										49
48	41		93	104						48
47		45								47
46										46
45			92							45
44				102-103						44
43					17					43
42			91							42
41			90	101		41	24			41
40	40			100						40
39				99				30		39
38		44								38

Teacher Norms (contd.)

Percentile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
37			89	98						37
36						40				36
35			88		16		23			35
34										34
33		43		96-97		39				33
32	39		86-87	94-95	15	36-38				32
31			84-85							31
30			83	93						30
29			82		14				27	29
28				92		35		29		28
27		42								27
26	38		81				22			26
25			80		13	33-34	21			25
24		41	78-79	91						24
23	37		77	90						23
22		40		88-89		32		28		22
21			76				20			21
20		39								20
19	36		75			31	19			19
18			74	87	12					18
17			72-73							17

Teacher Norms (contd.)

Percentile	FD-L	FD-R	GRIP-L	GRIP-R	SHAPE	AR	TONAL	PITCH	RHYTHM	Percentile
16							18	27		16
15					11	30				15
14				86			17	26		14
13		38	70-71			29			26	13
12				83-85	10	27-28	16	25		12
11	35			80-82	8-9					11
10				79			15	24		10
9								23		9
8	34		68-69	78	7	24-26			25	8
7						21-23	13-14	22		7
6				74-77	5-6					6
5	33	37					12			5
4	32		67	72-73		20		21	24	4
3	31	36	64-66	68-71	3-4			19-20	23	3
2	30-					14-19	11-		22	2
1		35-	63-	67-	2-	13-		18-	21-	1
N	92	92	91	91	91	91	92	92	92	N
$\overline{X}$	41.08	45.75	100.21	112.97	18.23	43.49	24.24	30.35	28.10	$\overline{X}$
SD	5.16	5.41	29.01	32.97	6.80	13.04	5.30	3.90	1.85	SD

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